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Cyber-victimization and Its Impact on Victim's Psychosomatic Status

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Abstract: Cyberbullying is an important issue to discuss and investigate. This study is a theoretical and empirical research aimed at proving cyber-victimization's negative impact on psychosomatic health. A direct relationship between these two phenomena is that poor mood regulation in childhood entails dissatisfaction with surrounding world causing rage against weaker peers, victimization, which affects victims' psychosomatic status. Methods used are literature analysis for the research and empirical part assessing aggressiveness in children (Buss-Darkey Inventory), their emotional state and psychosomatic health problems caused by victimization (authors' questionnaire). As a result young victims' psychosocial problems are seen as having negative consequences in later life. Because of these consequences, bullying becomes a hot topic and causes researchers, parents', as well as school teachers and school psychologists' concern. Cyberbullying will continue as long as electronic gadgets and communication devices are plugged in and used which is becoming an increasing problem due to dissemination of information, telecommunication technologies and the involvement of children and adolescents in the widespread digitalization of various spheres of life. In conclusion we recommend teachers and parents to develop understanding of cybervictimization, besides to pay attention to their children's emotional intelligence development that should help them resist victimization and avoid health problems.

Keywords: victimization, bullying, cyber attack, violence model, cyber-bullying model, motivation, aggressive personality, cyberspace aggression, cyber-victimization.

Introduction

School bullying is defiant behavior initiated by one or more individuals against a victim, verbal or physical abuse, bullying and humiliation. Although the name suggests a specific location, bullying can take place anywhere (school, schoolyard, park, street, etc.). In addition to the direct participants in bullying, there are also passive (or active) witnesses of bullying who either take sides or simply observe the process. Many studies identify witnesses as important contributors to bullying and cyberbullying incidents (Salmivalli, 2014), which can worsen or improve the victim's situation by supporting or alleviating their suffering (Pepler, Craig, and O'Connell, 2010, pp. 249). It has been proven that witnesses react negatively to victims who post too much personal information and brag about their achievements (Schacter, Greenberg and Juvonen, 2016). Also evidence exists that adolescents tend to overestimate the salvific help of witnesses, who, as a rule, are wary of being in the position of a victim or of lowering their status in a social group, so they always support the strongest or prefer not to interfere. An important fact is that schools with no bullying are characterized by cohesion and a variety of extra-curricular forms of interaction between students. "Not only an active social life, but also the atmosphere of openness, the possibility of clarifying conflicts under the guidance of a caring teacher - these are the conditions for resisting bullying" (Lane, 2001, pp. 240-274).

The well-being of citizens is recognized as an important indicator of a country's development. In many countries, various aspects of children and adolescents' well-being - from psychosomatic health to children's rights respect - are becoming the focus and goals of government's social and educational policies. Particularly often discussed is the ways children and adolescents' well-being is being influenced by digital technologies spread that has fundamentally changed life in the 21st century. Modern life is

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inconceivable without electronic gadgets and telecommunication devices. However, it is obvious that children and adolescents are most vulnerable to the risks associated with the digital technologies' negative impact. Computer games, social networks and telecommunication gadgets are often blamed for impairing children's psychological well-being, for putting in jeopardy their somatic and psychological health, and interfering with learning and communication.

At the same time, there are not enough scientific studies that would unmask digital technologies influence on children and adolescents' psychosomatic condition. The results of the present research are contradictory and topical. In our study we analyze digitalization's major impact on various aspects of children and adolescents' psychosomatics. Modern digital technologies offer various opportunities, from distant learning at the world's best universities to searching for information that can help protect a person's health, safety and rights. But mainly children from well-to-do and educated families can benefit from these opportunities. Others, even if they would like to use the Internet, they may not have the necessary equipment or skills to use advantages of modern technologies. The problem is due to the easy and fast access to the Internet and other information technologies.

It should also be noted that the Internet and social media is a space where children face age-specific problems that they also face in real life. Therefore, in matters of listing Internet threats and offering means for their prevention, both increasing digital literacy and systematic support of children and adolescents in solving the classic problems of uncertainty about the future, unstable self-esteem, seeking recognition, dissatisfaction with oneself, etc. are important.

A variety of research works are devoted to different aspects of cyberbullying and cyber-victimization: "these are gender-age, social activities, life-style and sexual inclinations" (Frolova and Senina, 2005; Shalaginova, Kulikova and Cherkasova, 2014; Soloviev, 2012; Soloviev, 2015; Zvereva, 2008). The conclusion of these studies is that cyberbullying is based on images of sexual humiliation, death threats, and highlighting teens' external flaws or mental abilities.

Numerous studies have defined cyberbullying as a deliberate and aggressive act carried out via electronic media. Cybervictimization is mainly related to the misuse of digital devices and gadgets such as mobile phones (text messages, calls) or the Internet (instant messaging, gaming sites, social networking sites, email, chat rooms). It is a real problem that adolescents' Internet activities are not controlled by parents or other adults. Disguised, unnoticed cyberbullying leads to dire consequences - at the worst - to adolescent suicidal behavior, but it also destroys a constructive, development-oriented and creative atmosphere of cooperation and trust in other people. Among the main consequences of cyberbullying there is a suicidal behavior, the development of depressive and anxiety states, self-injury, psychoactive substances intake, psychosomatic symptoms, the development of anorexia, bulimia, insomnia as a result of decreased self-esteem due to bullying. Recipients also report higher levels of internalizing, cognitive and motor impulsiveness and emotional dysfunction. Alexithymia is also possible.

Traumatic experience and childhood abuse were found to contribute to psychopathological problems and dissociative symptoms (Zych et al., 2017; Chang, et al., 2019; John et al., 2018; Pozzoli and Gini, 2020). It was also concluded that the time the cyber attack lasts matters causing more serious impact, especially symptoms associated with sleeplessness, decreased immunity, frequent and severe headaches, eating disorders, or attention deficit. Added to this, conflicts with parents, with other students or teachers at school, emotional and mental disorders are also the symptoms. Increased anxiety, unreasonable anger, experienced loneliness, frustration, and deep depression are often highlighted as results of cyber-victimization. Some studies have found emerging mental health issues: negative body image, problems with mood swings. Narcotic substances intake, theft, hooliganism, self-injury, harm and rule breaking were found among external behavioral problems.

While cyberbullying seriously affects children and adolescents' psychological health, there are a number of factors that can reduce this impact. Overall satisfaction with life, friendly family relationships (as compared to satisfaction from socializing with classmates or academic achievement) reduce the likelihood of suicidal thoughts and intentions. A factor that reduces the risk of suicidal behavior in cyberbullying victims is the experience of belonging to a school, a peer group, and their social support (Grebенкин, 2006).

The contemporary research of children and adolescents' cyberspace aggression remains amazingly high due to the ongoing increase of digital communication rates, social media development and new interaction formats and the socialization via digital devices peculiarities. It should be mentioned that information technology development has changed modern society life as a whole and communication in particular.

Unfortunately, such changes affect people not only in a positive way, but also negatively. Due to its anonymity the Internet provides virtual interaction as a free choice of social roles and activities. This

type of communication is unsafe and can damage the children and adolescents' psychological health, thus contributing to some psychosomatic issues. Analyzing aggressive and destructive behavior in the Internet, we can find it relevant "to an excessive self-disclosure in social networks and posting extremely frank, provocative content, an increased interest in the details of personal lives of others, but a surprisingly low level of friendly support, negative family impact and sexual violence" (Volkova, 2008). One of the dangers of online communication is the ever-increasing cyberbullying and cybervictimization. "When new computer technologies and social networks have entered our life, school bullying has evolved into a completely new and sophisticated form of abuse in cyberspace" (Audmaier, 2016). This concept was first defined as "the use of information and communication technologies to support repeated hostile behavior aimed at a person or group of people with the purpose of insulting and humiliating (verbal aggression)" (Belsey, 2019). Since then, cyberbullying and cybervictimization definitions have changed dramatically, getting more aggressive and sophisticated due to technology development and improvement, and it is usually aimed at people who cannot confront insult or withstand attacks. Analyzing different definitions found in the studies it is easy to formulate differences between cyber-victimization and traditional bullying: while traditional bullying (sometimes called a school-yard bullying) implies direct contacts between a bully and a victim which can end up in a physical violence, all actions aimed at a person in cyberbullying take place in virtual space anonymously, never get physical and is always disseminated across the cyberspace within incredibly short time. If a teenager can hide in the safety of a house and escape ordinary school bullying, there is no escape from cyberbullying that exists everywhere, where any electronic device or gadget is connected to the Internet. But this difference is by no means the only one, and others relate not to the victim, but to the bully. In the virtual space, a teenager can choose any social role; it becomes possible to create an alternative "image of oneself". In addition, the real personality can be deformed, as a result of which teenagers cease to be themselves, to feel responsibility for their actions in front of other people or in their own eyes.

In most cases, cyberbullying is still associated with bullying at school; however, the distinctive features of each of these aggression forms must be recognized. With the Internet aggression, a bully can be a complete stranger or distant acquaintance, compromising photos or pictures can be easily copied and disseminated (thereby increasing the ability to cause harm even after the aggressor has ceased his activities), and the victim cannot hide from the attack (without stopping the use of the network Internet, getting in social isolation). However, the victim is often at a physical distance from the attacker during the attack, which can also affect the perception of the severity of violence.

Surveys of adolescents in many countries (Gaffney and Farrington, 2018; Herrera-López, Romera and Ortega-Ruiz, 2018; Riddell, Pepler and Craig, 2018) show that cyberbullying is a fairly common form of interpersonal communication and a form of virtual extremism in today's youth world. Its intensity varies depending on a number of demographic characteristics (gender, age, race, religion, ethnicity, sexuality) that are important for researching the problem and for developing preventive measures and recommendations. Adolescents with behavior deviations are characterized by high personal inclusiveness, overestimated self-esteem, lack of criticism, while adults (parents and teachers) do not pay enough attention to such acts of misbehavior and often evaluate the deviant behavior as "growing up" issues and a manifestation of adulthood. Most often, juvenile delinquency is directed against peers, in many countries of the world it is characterized as a violation of the individual's rights and safety, that is, some kind of punishment is supposed. Take Germany for example, the Parliament of the country adopted a law against cyber aggression in 2015; according to this law unified standards of counteractions against cyber victimization were introduced. Violators of this law can get as long as two years of imprisonment.

Cyberbullying is also related to antisocial aggression caused by grudge against more socially adapted and successful peers, and it appears as an unfriendly manifestation towards classmates. Less successful adolescents use aggressive behavior to avoid emotional dependence, do not trust anyone or feel guilty for their misbehavior or have internal restrictions; usually they believe in external restrictions and administrative punishment. Such adolescents act almost to their own detriment, as they fall under the strict authoritative control. Many countries follow Germany's example and adopt legislation to combat cyber-aggression and to prevent cyber-victimization development.

Like other forms of violent behavior, cyberbullying is associated with human relationships, power and control. Those who mock others, try to establish power and control over the "weaker" ones, want their victims to feel insecure, to lower their self-esteem, to begin to doubt their adequacy, "thereby shifting the locus of control, attributing to victims responsibility for the contretemps that happen to them" (Kondakov and Nilopets, 1995).

Cyberbullying differs from other forms of bullying in many ways: while ordinary school bullying is something that often goes unnoticed by adults and is perceived by them as a part of the growing up process,

the so-called "school of life", cyberbullying is becoming an integral part of today's life for young people who are a generation that is "always in touch", so cyberbullying is felt most acutely. A new generation of electronic communications users is increasingly communicating in ways that are unknown to adults and are away from their supervision. Cyberbullying is also different in that it is a particular form of aggression, since it is easy for bullies to hide behind the anonymity that the Internet provides. Cyber bullies can deliver their offensive messages to a very wide audience at astonishing speed. Most importantly, cyberbullying does not provide any tangible feedback on the consequences of using information technology to intimidate others, so bullies do not see the suffering of their victims, do not feel empathy, regret or remorse. Cyber hooligans may not admit their actions, since it is usually very difficult to identify where the message has come from (they use fake accounts and nicknames), so they are not afraid of the consequences and punishment for their actions. Unlike regular school bullying, cyberbullying is often out of the reach of school administrators, as aggressive behavior often occurs outside school, messages coming to students' personal computers or through mobile phones.

Accordingly, the recent boom in the use of Smartphones, social media, online multiplayer gaming and chatting by young people has not only opened up new places for social interaction and communication, but also a space dominated by violence and aggression that victimizes children and adolescents. It is a new virtual space that breaks down the old boundaries of family and community that might have protected teens from aggression in the past. Global electronic communications have not created new psychological threats, but they have made it much more difficult to protect adolescents from risks, as a result of which many of them are exposed to blackmail, psychological pressure, humiliation, which only a few children could face in life before. Now it's not just teenagers left to their own devices and raised in the street or influenced by bad guys, they can be abused and bullied without even leaving the comfort of their homes. "Virtual" bad company is easily accessible to most children and young people.

In the studies carried out by Russian and European researchers, aggressive behavior usually is aimed at causing harm (physical or moral) to another person. Violence involves not only actions, but also the intention to harm physically or verbally. With technological progress it is impossible to define aggression monosemantically as today it includes many different types of behavior that do not correspond to the generally accepted meaning of violence. Definitely, we should consider physical aggression first as it varies from brawl to serious assault and even murder, but verbal aggression is no less serious as it can cause moral and emotional problems in victims, most of them in the long run. In our study, "violent behavior" is not to describe physical aggression that has a significant risk of causing serious injury to the victim, since we focus primarily on cyberbullying as the most dangerous and wide-spread form of violence, as there is no shelter to hide from it. Despite the fact that Internet bullies cannot physically harm the victim, cyber-victimization can be accompanied by significant psychological or psychosomatic consequences, many of them will stay with the victim in the long term. With regard to the subject of our research, the following factors of the cyberbullying phenomenon can be distinguished: a) the child's propensity for aggression (for example, instability, moral promiscuity, etc.); b) previous experience of bullying (stressors); c) constraints associated with cyberspace (for example, the strength of the virtual disinhibition effect and technological efficiency); d) parenting factors (for example, relationships with parents, monitoring of interaction technologies).

Cyberbullying involves verbal abuse and manipulation, but online insults and rumors are also considered. Violent acts are rarely the result of one cause; rather, many factors contribute to deviant behavior. Accordingly, media impact can be considered as one of the factors that impact cyber aggression and cyber victimization growth and spreading. We will not argue that the violence that teens see in the media (movies with violent content, video games with violent scenes, abuse and harassment in the reality shows) is the direct cause of teens' violent behavior online and in real life. However, research on violence in the media and games shows that online violence reinforces existing aggression. Violence in the media is perceived differently by different researchers. Likewise, there is no common definition in public opinion of what aggressive and violent behavior on the Internet might be. However, most researchers have a clear understanding of what media violence and violent behavior is in online games (Berkowitz, 2001). Most of them define violence in the media as a visual depiction of physical aggression acts by one person or group of people towards others (Maltseva, 2009, pp. 11). This definition appeared as consequences theories of media violence developed, and now it is an attempt to describe the type of violence that causes the viewer to be more violent, not only online, but also in everyday life. "Bullying on the Internet, even for adults with good self-esteem, is not an easy trial. It is important for parents to understand that this is not some kind of mythical threat, but absolutely real. Indeed, for a modern child, the telephone and social networks are real life, an analogue of a courtyard company of friends, where everything is in plain sight. It is impossible to deprive a child of communication in social networks, but it is important to control and limit

this communication, protecting a child" (Malkina-Pykh, 2006).

The theoretical approaches refer to biological processes in explaining aggression by emphasizing psychological mechanisms involved in any aggressive behavior. It should be noted, however, that the earliest trend in the theoretical development of this tradition - the psychoanalytic interpretation of aggression according to Z. Freud - was also based on a biological approach, understanding aggressive behavior as an expression of a genetically rooted instinct. Aggression is seen by Sigmund Freud as a reaction to blocking or destructing of libidinal impulses; aggressive behavior is not only innate, originating from the death instinct built-in into a person's consciousness, but aggression is also inevitable, because if the "death drive" is not turned outward, it will soon lead to personality destruction. Freud's metapsychology (Freud, 2021) includes topographic, dynamic, structural, genetic, economic and adaptive approaches.

Aggression is understood very broadly in psychoanalytic literature. It can involve physical or verbal action; conscious or unconscious desires of tension, a specific type of psychic energy and the idea of the death instinct (Storr, 1969, pp. 97). The theory of aggression by Z. Freud and K. Lorenz is built on the idea of aggression as an instinct that was originally inherent in biological species; it ultimately finds a definite expression in the verbal or physical aggression of a human being. Both Z. Freud and K. Lorenz came to the conclusion that in case aggression does not find a way out, it will lead to tragic consequences. But that was the only point they agreed on. In other respects, their views seem to be the opposite. Z. Freud declared the theory of aggression as the instinct of destruction doctrine while K. Lorenz considered such a theory unacceptable from the biological viewpoint, since he believed aggression as an instinct serves the cause of life, while Z. Freud considered it as the "service of death".

Their disagreement disappears when K. Lorenz talks about the initial function of aggression in species-preserving during the evolutionary process. "K. Lorenz is trying to substantiate and strengthen his hypothesis that a person's defensive aggression turns into a constantly acting and self-developing intention, which makes him seek and find conditions for relaxation, or leads to an explosion if there is no way to find a suitable stimulus" (Fromm, 2021). According to Fromm if there are no suitable causative agents of serious manifestations of aggression in socio-economic structure, the pressure of the instinct is so strong that a human being is forced to change social conditions, if they don't or can't it might lead to unexpected and inevitable violence outbursts and unreasonable aggression manifestations. K. Lorenz (Lorenz, 1994) believes that a thirst for destruction drives a person through life; this viewpoint actually coincides with Z. Freud's ideas about aggression and death (Fromm, 2021) with one discrepancy: according to Z. Freud, the passion for destruction opposes sexuality and life in general, while K. Lorenz believes in love as the result of aggressive drives.

Materials and Methods

As a research method, a theoretical analysis of researchers' articles and books (more than 100 sources) found in electronic libraries ScienceDirect, Jstor, Springer, Cyberleninka, SAGE etc., mostly for the last 5 years was carried out. Emphasis was made to search for articles and books describing original research using author's methods of research and models of aggression, violence, cybervictimization and victims of cyberbullying psychosomatic problems. The theoretical review was to generalize the results of previous research in Western scientific thought on the topic of cyberbullying and victimization, to identify the links between the studied phenomena, and to systematize consistent or contradictory data. The term "victimity" means realized or potential predisposition, the ability to become a victim crime under certain circumstances, or avoid danger where it is objectively preventable due to objective and subjective circumstances. In other words, the victimization of a person is made up of personal and situational components that are interconnected and interdependent. In addition, there is a general victimization, depending on social, role, gender, age characteristics of the individual, and special, implemented in attitudes, properties and attributions of the personality. Victimization is divided into eventual, i.e. random, causal and an investigative complex of factors under certain conditions to become a victim of criminal encroachment, i.e. the ability to become a victim as a result of making a victimogenic decision and/or victimizing activity.

The authors' questionnaire on cyberbullying designed for sociodemographic variable recipients and describing its consequences, diagnostics of the state of aggression (Buss-Darkey questionnaire), emotions test (Buss-Darkey test modified by G. Rezapkina) were used as methods assessment and evaluation in the study that involved 151 people (118 females and 33 males) - schoolchildren of secondary schools and students of secondary vocational education (University level). In our survey (2021-2022), 93% of adolescents who experienced cyber-victimization before believe that the experience negatively

affected them (e.g., “caused depression and/or self-doubt, unwillingness to socialize with peers”). To further complicate the measurement of this phenomenon, we considered the time during which the respondent experienced cyberbullying (during certain periods of time, for 2-3 months for 5 years or for 2-3 weeks). As with any new psychological phenomena rapidly developing, researchers have not yet established a standard accepted method or measuring tool. Instead, each research group independently develops its own survey instrument to assess teen cyberbullying and the victimization it causes. As a basis, we took the traditional Olvæus-Likert scale, “a psychometric scale developed by R. Likert in 1932 (a scoring scale for each individual item)” (Wuensch, 2009). For the study, we have chosen the following definitions of cyberbullying that include not only a computer, but also other means of communication, have suggested the regularity of bullying (for example, at least once or twice in the last few months), and estimated approximately 2- 3 month time period of bullying. We have considered cyberbullying in a modern digital society as a threat to the psychological well-being of all the participants. The statements in the questionnaire were consistent, simple in wording, unambiguous for perception. However, the novelty of constructing such a scale for cyberbullying and the ability of even one incident to cause noticeable discomfort and / or deterioration in the psychological or psychosomatic condition of the respondent led to the fact that we used less stringent assessment criteria (i.e. requiring that bullying or victimization take place at least 2-3 times a month for categorization). Nevertheless in the research the types and key indicators of cybervictimization have been identified.

Results

“Although cyberbullying is a new and notorious social phenomenon, much of the research has its roots in the traditional research on school bullying. The current focus of our study was the demographic characteristics of those who were engaged in cyberbullying. In particular, we assumed that the degree of cyber participation would differ depending on age, gender, and personality characteristics previously identified and described” (Makarova, Makarova and Makhrina, 2016). Extensive research has identified gender differences in aggressive behavior. Male respondents are more likely to be perpetrators and victims of direct forms of bullying (e.g. physical bullying), female respondents are more likely to engage in verbal and social forms of bullying (spreading rumors, arranging social isolation, boycott or socializing restrictions). Based on these patterns and the fact that innovative communication technologies enable verbal and social aggression, we hypothesized that girls are more likely to be the victim than the aggressor in cyberbullying, thus getting more psychosomatic problems as a result. While most studies did not find gender differences—girls and boys are equally likely to be both victims and perpetrators—our study found gender differences that differ by type of involvement (for example, boys are more likely to become cyberbullies, while girls are more likely to become victims of cyberbullying). The survey revealed that the number of girls in grades 6-8 was disproportionate in the sections of victims and bullies. Our results (Figure 1 and Figure 2) also show a discrepancy between the final data, which was difficult to explain.

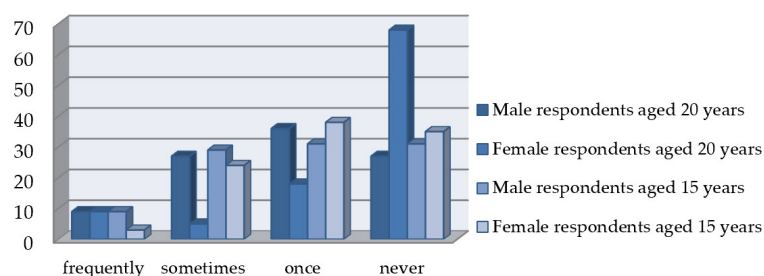


Figure 1. Frequency of cyberbullying experiences by male and female respondents

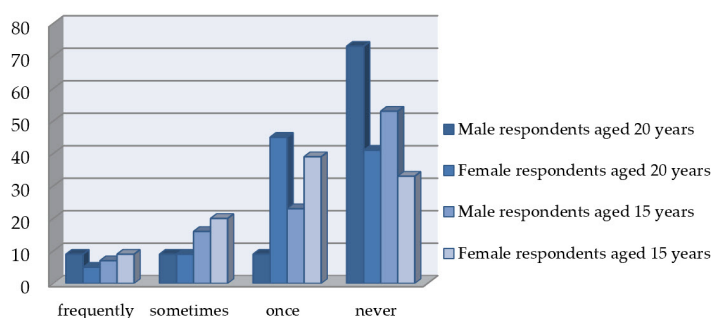


Figure 2. Frequency of psychosomatic problems male and female respondents have as cyberbullying victims

However, these results indicate that gender differences may in particular be caused by age - gender differences disappear among the older adolescents surveyed. Age is another demographic variable that has been extensively studied in bullying and victimization studies. There is an opinion that bullying gradually decreases with the age, the highest level of participation was registered among secondary school students (i.e. ages 10-14). Physical forms of bullying typically decrease as adolescents gain verbal and cognitive skills. Bullying, however, does not disappear, but rather becomes more subtle and difficult to detect, as in the case of social bullying or cyberbullying, so the trends in traditional bullying most likely reflect not only an increased tendency for young children to bully peers, but also problems with self-identification, measuring the degree of bullying and defining the boundaries of what is permitted. Therefore, it is not surprising that the age trend for cyberbullying is exactly the opposite of what researchers have already found in traditional bullying. Studies have shown that the participation of adolescents in cyberbullying tends to increase with age. This difference may reflect not only the accessibility of communication technologies during adolescence, but also the difference in how the dynamics of the need for self-assertion are revealed. In addition, the older adolescents are, the more willingly they report their participation in cyberbullying: 8% in 7th grade, 12% in 8th and 9th grades, 23% in 10th and 11th grades.

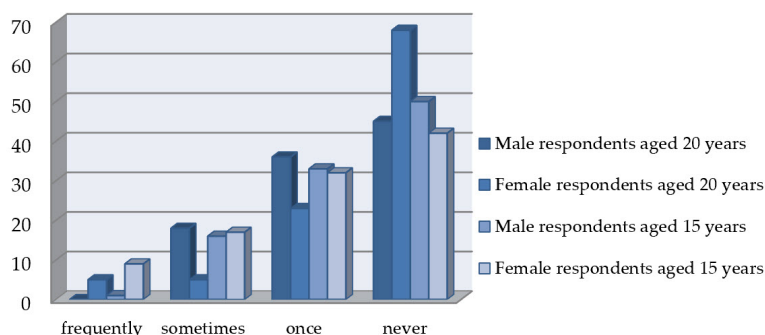


Figure 3. Frequency of psychosomatic problems male and female respondents have as cyberbullying victims

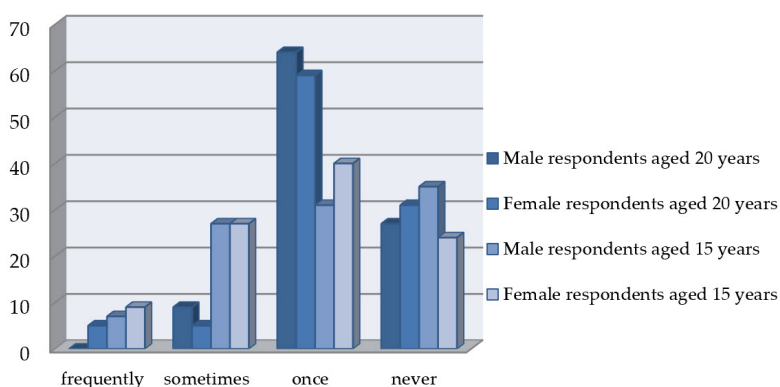


Figure 4. Frequency of psychosomatic problems male and female respondents have as cyberbullying victims

Our study shows that cyberbullying and cybervictimization are the cause of a number of psychological, social, somatic and behavioral problems and disorders. Victims often report symptoms of depression, fear, social anxiety, and suicidal ideation. They tend to suffer from low self-esteem and have negative image not only of themselves, but also of their peers, socialization in general and friendships in particular. Bullying is also associated with external behavior disorder (e.g., deviant and delinquent behavior), internalization of distress (e.g., depression, suicidal attempts etc.) In addition, victims of bullying have a reduced ability to empathize, especially express emotional empathy, which may be caused by frequent and non-random physical and socio-psychological bullying. Not surprisingly, new evidence suggests that cyberbullying is associated with significant stress and emotional discomfort. It turned out that victims of the Internet aggression, regardless of gender and age, were 2.5 times more likely to show depressive symptoms. Personal self-esteem also suffers, with 35% respondents reporting low self-esteem. According to a schoolchildren's survey, adolescent delinquent or deviant behavior, depressive symptoms and suicidal attempts, addictions and chemical substance intake are directly associated with cyberbullying. Moreover, as acts of bullying become more frequent, the aggravation and intensity of the youth's psychosocial, psychosomatic and behavioral deviations increase. This finding is consistent with the data presented that the frequency of traditional bullying in school is associated with mental health problems; to these we can add depression, anxiety, psychosomatic symptoms, alcohol and psychoactive substances consumption, and suicidal behavior. In addition, the history of cyberbullying research is still very young, so the important variables previously identified in traditional bullying (anxiety, self-esteem, lack of empathy) are not yet sufficiently explored in cyberbullying victims.

Discussions

Modern adolescents are worried about many issues - rapid physiological growth, puberty, professional self-determination, the desire to be happy in their personal life, and many others. Often, adolescents are not aware of their goals and desires, and therefore, a feeling of anxiety, emptiness, and fear of communication, hostility, and dissatisfaction with oneself may emerge (Mukhina, 2004). Adolescence is becoming a key issue in terms of relationships with people around them.

Moreover, a developmental forecast is necessary for comprehending how violence in media causes adolescents' behavior, also for recommending how to prevent risks and cope with adjacent problems. Not necessarily all aggressive children with antisocial behavior become violent when they grow up. However, "recent studies showed that adolescents and adults with serious abuse problems often were very aggressive and even abusive in their childhood" (Vorobieva, 2008, pp. 48). The best, though not the only, predictor of aggressive behavior in adolescents and even adults is aggressive behavior in childhood. Thus, anything that contributes to the aggressive behavior of young children is statistically a risk factor for the formation of violent behavior in adults (Figure 5).

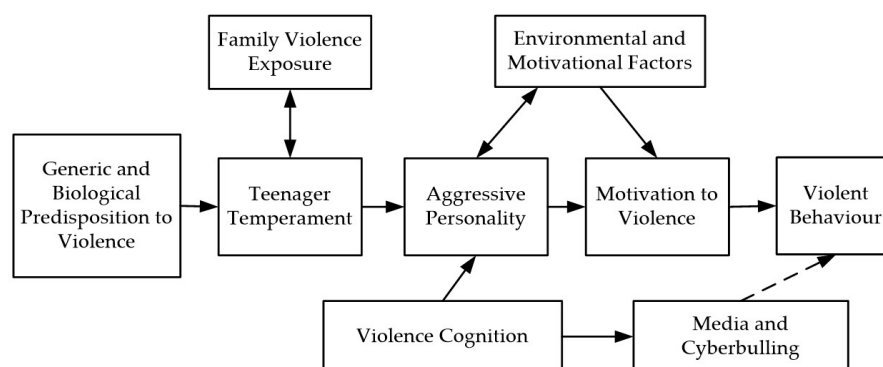


Figure 5. Cyberbullying and Violence Model

"Cyberbullying is a phenomenon in which people with certain psychological characteristics are involved" (Glazman, 2009, pp. 159). It is customary to distinguish three roles in this process: an aggressor (bully), a victim and observers (witnesses). Character traits of all participants of the process are: "a persecutor is an impulsive person who wants to dominate, has leader's skills, demonstrates aggression, does not feel

remorse or compassion for people" (Makarova, Makarova and Makhrina, 2016, pp. 293), family violence can contribute greatly for aggressive behavior in adolescents with these character traits. The victims, on the contrary, demonstrate shy, anxious disposition, they are prone to tears, uncommunicative, have inferiority complex, feel dependence on circumstances and surrounding people. Various demographic characteristics (Figure 6) such as gender, age, ethnicity, religion and income level can be predictors of emotional maladjustment; a wide range of personality characteristics - from introversion to intelligence level - can also be used to predict the behavior of victims of cyber-victimization. As for the observers, they often feel fear, helplessness and at the same time they usually support the persecutor as they are afraid of becoming a victim, so they take the side of the strongest, etc.

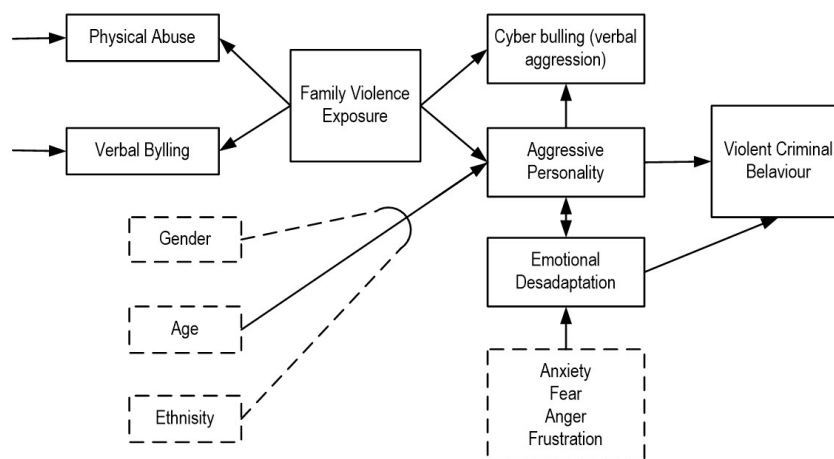


Figure 6. Elements of Cyberbullying Model

According to a meta-analysis of several studies, cyberbullying and victimization rates differ depending on these phenomena definitions. Overall, most studies on cyberbullying show adolescent prevalence and engagement rates between 10% and 40%, with 15% of the same adolescents being cyber-victimized. Unlike traditional bullying, cyberbullying poses particular challenges to prevention and intervention due to Internet unique features such as "complete anonymity, rapid social dissemination, and increased free access to a victim's account" (Romera et al., 2017, pp. 1184). Thus, cyberbullying experiences are invariably associated with a wide range of negative consequences. For example, young people who experienced cyberbullying in childhood have significantly higher rates of psychosomatic problems (Beckman, Hagquist and Hellström, 2012), higher levels of depression symptoms (Nixon, 2014), a higher level of anxiety (Sontag et al. 2011), lower self-esteem (O'Brie and Moules, 2013), and even higher levels of suicidal thoughts and attempts (Gini and Espelage, 2014). In addition, the consequences of cyber-victimization negatively affect the emotional state of victims and their ability to socially adapt (Elipe et al., 2015). In particular, it has been noted that cyber-victimization is associated with negative feelings such as the anger of helplessness, frustration, sadness, fear, shame, guilt, or loneliness (Ortega et al., 2012, pp. 342).

In recent years, cyber-victimization has spread globally, as children and especially adolescents who become victimized and persecuted, all use technical devices in their daily lives on a regular basis, particularly the Internet and mobile phones. To this end, this study proposes to research, on the one hand, the role of intrapersonal factors and self-esteem in the symptoms of depression, and on the other hand, the role of relationships between adolescents in order to understand the psychological profile of persons involved in cyber-victimization as a victim. The model of the three I's, developed by E.B. Slotter and E.J. Finkel to explain violence, is adapted for the study of cybercrime. It considers both individual and situational variables: "instigation" (incitement, that is, factors that provoke aggression), "impellance" (that is, factors that contribute to cyberbullying), and "inhibition" (inhibition, that is, factors that reduce cyber stalking) (Slotter and Finkel, 2011, pp. 36).

When adults do not pay enough attention to victimization by peers, it can influence internal and external problems of development that lead to a decrease in the overall level of well-being (Makarova, Makarova and Mishchenko, 2021, pp. 147). However, not all cyber victims have the same negative results; the degree of intensity is also not the same (Dredge, Gleeson and Garcia, 2014, pp. 13). Certain risk factors are thought to contribute to "cognitive and emotional adaptation important aspects" (Kowalski et al., 2014, pp. 1073). Research shows that certain cognitive socio-emotional variables can determine the effects of cyber-victimization on psychosomatic well-being, such as "social ability, empathy or personality

traits" (Tofi, Farrington and Lösel, 2014, pp. 1). Over the past two decades, one variable has been identified and developed that demonstrates growing evidence of its important role as "a buffer against cyberbullying negative impacts, this variable is emotional intelligence" (Extremera, Duran and Rey, 2007, pp. 1069). Studies have shown that people process information differently during stressful events that are emotionally meaningful to them, the way they do it is important for healthy everyday functioning and positive relationships with other people. "Emotional intelligence is conceptualized as a group of abilities to perceive emotions, access emotions, amplify thoughts, understand emotions and emotional knowledge, and regulate emotions for intellectual growth. Understanding emotional intelligence is associated with the ability of people to track both their own and others' emotions in order to further use the information received in various activities" (Vorobieva, 2008). In other studies, along with the term "emotional intelligence" such concepts as "emotional thinking, emotional potential, emotional consciousness, emotional competence, emotional sensitivity" are applied as synonyms or constituent elements of emotional intelligence as a whole (Alexandrova, 2009, pp. 71). Several studies have shown that "adolescents with advanced emotional intelligence are able to use and regulate their own emotions and negative emotions of others to improve psychological health and prevent psychological maladjustment" (Fernandez-Berrocal and Extremera, 2016, pp. 311). Previous research on both traditional bullying and cyber-victimization has shown that students at higher levels of emotional intelligence are less exposed to peer pressure and even exhibit more positive social behavior (Garaibordobil and Onederra, 2010, pp. 243). Scientists recently found that high levels of emotional clarity but low levels of emotional recovery in cyber victims contribute to negative emotional impact, while high levels of attention, coupled with high levels of recovery, tend to reduce anger and depression (Elipe et al., 2015). These results suggest the decisive role of the variable "emotional intelligence" in cyber-victimization, especially in the field of emotion regulation, demonstrate the relevance of influence on health and social adaptation indicators. In terms of emotions, cyber victims have a higher ability to respond to others' emotions and a lower ability to regulate and understand their own feelings and emotions. In Russian psychological studies of emotional intelligence the problem was analyzed from the application point of view: in the framework of psychological counseling, training and education, activities management and others. One of the first emotional intelligence definitions was given by Garskova G.G. Unlike other researchers the author describes the concept as "the ability to understand a person through emotional manifestations, intellectual analysis and synthesis makes it possible to manage the person's emotional sphere" (Golubina, 2013). I. N. Andreeva in her monograph "Emotional intelligence as a phenomenon of modern psychology" considers emotional intelligence models, their structure, gender differences in emotional intelligence sphere. According to I. N. Andreeva, "emotional intelligence is nothing but a set of mental abilities for identifying, understanding and managing emotions" (Andreeva, 2011).

Taking into account all the above considerations, the purpose of our study was threefold: first, to analyze emotional intelligence's role in relations to victims of cyber-victimization. Second, we aimed to investigate whether there is a meaningful interactive model that includes emotional intelligence as a predictor. Third, we examined cyber-victimization and its impact on the psychosomatic status of the victim.

In addition to those above, there are several more definitions of emotional intelligence that we have used in our study as a working one: integrity of a person's intellectual and emotional-volitional sphere (Davydov, 2011); "training providing comprehension of a person's own feelings and emotions and comparing them with other people's feelings allowing for successful interpersonal interaction" (Golubina, 2013); and "an internal emotional resource of human emotional regulation" (Kiseleva, 2015), this one helps keeping emotions under control in uncertain and dangerous situations.

Analyzing all the above definitions, we link emotional intelligence with the ability to interpret emotions in order to organize effective interaction in society and avoid conflicts, psychological and psychosomatic problems as a result of these conflicts. "The content side of the term makes it possible to clarify the essential features of emotional intelligence. These include the ability to manage emotions inducing actions, to understand others' emotions, emotional awareness, to influence other people, to distinguish between genuine emotions and their malingering, to determine emotions causes and consequences" (Meshcheryakova, 2011).

There is no consensus between Russian and European viewpoints on emotional intelligence and what advantages this type of intelligence gives to a person. According to D. Goleman, "highly developed emotional intelligence makes people socially active and successful; their life is full of events and ethical principles; there is no place for anxiety reflections, while those with underdeveloped emotional intelligence tend to hesitate, procrastination ultimately affects their activity productivity" (Goleman, 2009).

According to I.N. Andreeva (Andreeva, 2011), the presence of emotional intelligence contributes to a person's adjustment to changes through the ability of internal impulse control and restriction. On the other

hand, a group of American psychologists adheres to the belief that "the presence of a highly developed ability to understand and interpret other people's emotions, as well as an increased sensitivity to positive as well as negative emotional states, often lead to depression" (Ciarrochi, Dean and Anderson, 2002), thus proving that low emotional sensitivity has not only disadvantages, but also advantages. According to N.P. Alexandrova, emotional intelligence cannot be considered a "communication success predictor" or "counteraction measures to aggression and violence", although a person can achieve certain success making a correct use of its presence (Alexandrova, 2009). Despite the existing discrepancies between the researchers' opinions, some of them believe in the ability to manage emotions as a prerequisite for successful integration into society, interaction and social communication, so we may say it is vital to develop all the above mentioned skills.

According to Russian researcher V.K. Zagvozdkin (Zagvozdkin, 2008), students of many US schools are taught coping strategies with the help of which they develop emotional intelligence competencies and practice resolving conflicts – reacting to fear; aggression; anger and other emotions. The advantage of such training is that emotional intelligence competencies development covers all spheres of human activity – "students learn how to plan interaction in advance; what communicative partners to choose for interaction, how to define a safe topic for communication". They are also taught how to get aware when something goes wrong and change a topic of interaction before it is too late. Coping strategies can be found on the Internet, a person can choose from a variety of them and adjust them to their own emotional challenges. Programs aimed at special needs students' emotional intelligence within the inclusive education framework are also gaining their popularity because inclusive education is spreading widely within the mainstream.

Wrapping up the discussion, it is important to mention that at the present level of society development, emotional intelligence is becoming a vital personal competence, allowing interaction development in different situations, facing a challenge, avoiding conflicts and choosing the most effective way to reach the goal. In our study we focused not only on cyber-bullying, but mostly on interrelations between emotional intelligence development and cyber-victimization confrontation.

Conclusions

In conclusion, we use the findings of previous studies on this topic (Makarova, 2019; Makarova, Makarova and Maximets, 2020; Makarova, Makarova and Korovin, 2022) to develop understanding of cybervictimization. The present study results are to contribute to further investigation of cyber-victimization problems. The main factors contributing to cyberbullying and cyber-victimization are the risky use of information and communication technologies. Internet addiction also predicts aggression through cyberbullying. The online evil experience may be associated with some problems: victims' low self-esteem and self-efficacy, eternal locus of control, dissatisfaction with life, deterioration of school achievements and attitudes towards education.

Cyber-victimization and personality psychosomatic changes are interconnected, therefore it is necessary to analyze and take into consideration the moderating role of emotional intelligence in this association. Our research has confirmed the results of previous studies and their findings, the positive role of emotional skills in preventing psychosomatic changes in adolescents and regulating the level of cyber-victimization. In addition, our findings confirmed the results of earlier studies, finding evidence that emotional intelligence lies at the heart of a mechanism that could soften attitudes, resist and counter cyber-victimization (Makarova and Makarova, 2019).

Based on previous research on traditional school victimization and cyber-victimization (Bjelajac, Filipovic and Stosic, 2022), the present study found that higher levels of general emotional intelligence were significantly associated with lower rates of cyber-victimization. Our findings in this case are consistent with the assumption that "peer cyber-victimization propensity is to some extent related to emotional maturity or lack thereof" (Stosic and Jankovic, 2022).

Future research should carefully examine this issue, using age and gender criteria for emotional intelligence development to summarize and draw conclusions. It is possible that differences in the process of emotional regulation between men and women can form the basis for the study of a higher prevalence of emotional maladjustment in women and the use of maladaptive coping strategies in men. While the gender difference in relation to cyber-victimization warrants further research, one explanation is that adolescent girls tend to be more susceptible to indirect forms of bullying than adolescent boys, and the negative impact or even anticipation of stressful life events can impact psychosomatic status of teenagers, can lead to mood swings and cause increased anxiety, anger, depression, insomnia, loss of appetite,

addiction, self-harming behavior, and even suicide. Based on research, it can be argued that teenage girls tend to pay attention to mood and emotions compared to boys. This is why teenage girls are more likely to be victims of cyber-victimization. This clearly highlights the relationship between emotion regulation and cyber victimization. Moreover, we found that emotion regulation works differently depending on the level of emotional intelligence, influencing other areas of psychology, such as interpersonal relationships or psychological adaptation. Deficiency in emotion regulation is thus seen as a risk factor for cyber-victimization.

Therefore, the future implementation of any programs aimed at reducing risks of cyber-victimization should take into account emotional deficiencies or underdeveloped emotional intelligence in order to develop more effective training that focuses on the regulation of emotions and understanding the emotions of other people, and empathy development. It can be assumed that the formed skills of emotion regulation can provide significant support in predicting risks and in the fight against cyber-victimization. Prevention and intervention strategies should be tailored to the specific needs of adolescents and to anticipate the experience and social desirability of the intervention. It is also necessary to take into account the diagnosed psychosomatic problems associated with the experience of cyber-victimization, which will increase the generalization of results and help to use a wider range of prevention and intervention approaches (e.g. parents, school psychologists, peers). Understanding the design of professionally managed interventions focused on emotional knowledge, emotional self-efficacy, and emotional intelligence capabilities aims at reducing the risks of cyberbullying among children and adolescents and eliminating the negative consequences of cyber-victimization in the form of psychosomatic disorders. Incorporating aspects of emotional intelligence into online bullying programs, using a gender-responsive approach, will provide new insights into the interactive role that emotional intelligence, personality traits and social skills play in reducing negative psychosomatic symptoms.

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Conflict of interests

The authors declare no conflict of interest.

Author Contributions

Conceptualization, E.A.M., .E.L.M.; methodology, E.A.M.; formal analysis, E.L.M.; writing—original draft preparation, E.A.M.; writing—review and editing, E.A.M. and E.L.M. Both authors have read and agreed to the published version of the manuscript.

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